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ILLUSTRATIONS OF FUNGI—VI.

WILLIAM A. MURRILL

The species represented on the accompanying plate belong chiefly to the Boletaceae, a family of fleshy, pore-bearing fungi containing about seventy-five North American species, distributed in eleven genera. Most of the members of this family are edible, but, owing to the difficulty of distinguishing the few inedible species, they should be selected with the greatest care when collected for the table.

***Tricholoma personatum* (Fries) Quél.**

MASKED TRICHOLOMA. BLEWITS

Plate 19. Figure 1. $\times \frac{1}{2}$

Pileus thick, firm, convex to expanded, 5–12 cm. broad; surface moist, glabrous, lilac or purple, fading to grayish, becoming slightly brownish on the disk; margin inrolled and frosted when young, glabrous and often irregular with age; flesh white, firm, pleasant to the taste; gills crowded, rounded behind, free or nearly so, violet or lilac, becoming dull-colored with age; spores ellipsoid, smooth, dingy-white, dull pinkish in mass, 7–10 μ long; stem short, solid, often bulbous at the base, fibrillose to glabrous, lilac or violet, 3–6 cm. long, 1.5–3 cm. thick.

This species is of good flavor and not easily confused with dangerous species. It may be found in open woods or among long grass in rich fields during the autumn months. Its large size and the violet or lilac tint of all its parts should distinguish it from most other species. In large, mature specimens, the flesh becomes soft and readily absorbs water during wet weather,

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ILLUSTRATIONS OF FUNGI

which somewhat changes the appearance of the mushroom and lessens its value for edible purposes.

***Ceriomyces communis* (Bull.) Murrill**

COMMON CERIOMYCES. GOLDEN-FLESH BOLETUS

Plate 19. Figure 2. $\times \frac{2}{3}$

Pileus convex to expanded, depressed at times with age, gregarious, 4–8 cm. broad, 1–2 cm. thick; surface dry, tomentose to floccose-squamulose, often rimose-areolate, variable in color, usually some shade of red or purple, fading to brown; margin entire, fertile; context yellowish-white to flavous, reddish beneath the cuticle, usually changing slowly to greenish or bluish when wounded, especially near the tubes, taste mild; tubes adnate, convex in mass, slightly decurrent, becoming much depressed at times with age, yellow or greenish-yellow, changing to greenish-blue when wounded, mouths large, angular, irregular, 1–2 to a mm.; spores fusiform, smooth, olivaceous when fresh, fading to pale-brownish, $11\text{--}13 \times 4\text{--}5 \mu$: stipe subcylindric, often contorted, tapering at the base, flavous above, red or streaked with red below, longitudinally furrowed, glabrous or minutely scurfy, solid, sometimes yellow within at the base, 3–8 cm. long, 0.3–1.5 cm. thick.

This species is, in most localities, the most common and abundant member of the family, being the first to appear on mossy banks in early summer and continuing to fruit until late autumn. It is usually rather small, with reddish cap and stem, and large, yellow tubes, which turn blue when wounded. It is sometimes difficult to secure specimens for the table on account of a whitish mould which appears to be particularly prolific on this species.

***Marasmius oreades* (Bolt.) Fries**

FAIRY-RING MUSHROOM. SCOTCH BONNETS

Plate 19. Figure 3. $\times \frac{2}{3}$

Pileus convex to expanded, often umbonate, slightly striate at times when moist, fleshy-tough, drying easily, 2–5 cm. broad; surface glabrous, buff or tawny, fading with age or on drying; flesh thin, white, of pleasant odor and taste; gills broad, distant, free or adnexed, yellowish-white; spores subellipsoid, smooth, hyaline, $7\text{--}9 \mu$ long; stem cylindrical, rather slender, solid, tough, yellowish-white, villose-tomentose, 5–8 cm. long, 2–4 mm. thick.

This very excellent little species is to be looked for in pastures during spells of wet weather in late summer or autumn. Its habit of growing in circles will aid one in recognizing it. I have found it much more abundant in England and other parts of Europe than in this country. If found in sufficient quantity for table use, it should be cooked for some time, owing to its tough texture.

***Ceratomyces subsanguineus* (Peck) Murrill**

TESTACEOUS CERIOMYCES

Plate 19. Figure 4. $\times \frac{3}{8}$

Pileus convex to plane or slightly depressed, gregarious or cespitose, 5-11 cm. broad, 1-3 cm. thick; surface usually glabrous, somewhat viscid, testaceous, fading to ochraceous or isabelline, rarely pulverulent or partially rimose-areolate; margin obtuse, beveled; context thick, white, firm, changing slightly to very pale-roseous when wounded, slightly harsh or bitterish at first to the taste, but becoming mild; tubes truly adnate, separating slightly in old plants, decurrent, 5-7 mm. long, pale-yellowish, becoming brownish to purplish when bruised, mouths of medium size, edges thin; spores oblong-ovoid, smooth, very pale-yellowish, $8-9 \times 3.5-4.5 \mu$; stipe rather short, thick, tapering downward to a small radicate base, 4-7 cm. long, 1-2 cm. thick, nearly white, finely scurfy, sometimes reddish-dotted, flavous and reticulate above, solid, firm and white within.

This species is very rare, being known only from three localities, one in Pennsylvania and two in New Jersey. It grows under beech trees or in beds of moss. The conspicuous reddish or orange color of the cap soon fades, especially in bright light.

***Fistulina hepatica* (Huds.) Fries**

BEEFSTEAK FUNGUS. VEGETABLE BEEFSTEAK

OAK TONGUE. CHESTNUT TONGUE. BEEF TONGUE

Plate 19. Figure 5. $\times \frac{1}{8}$

Pileus large, fleshy, very juicy, dimidiate to flabelliform, 5-15 cm. broad; surface dark-red, somewhat sticky when moist, radiate-striate with age, margin entire to lobed; flesh thick, soft, tough, streaked with dark- and light-reddish lines, acid to the taste; tubes at first short, yellowish or pinkish, becoming 3 mm. long, plainly distinct from one another, and dull-ochraceous with

age; spores ellipsoid, smooth, yellowish, $5-7\ \mu$ long; stipe usually short and thick, lateral, colored like the pileus, often reduced to a mere tubercle and sometimes wanting.

This species occurs on decaying trunks and stumps of chestnut, oak, and certain other deciduous trees in this country and in Europe. On account of its resemblance to a piece of beefsteak, it has long been recognized and used for food. It should be thoroughly cooked, and, if the acid flavor is objectionable, sodium carbonate should be added during the process of cooking. I have found this fungus much more common on chestnut than on oak, and I have noticed that foreigners regularly visit old chestnut stumps and trunks in the vicinity of New York during late summer and autumn to obtain it. Since the chestnut trees have all been killed by the canker, the beefsteak fungus should appear in great quantity.

***Ceriomyces subtomentosus* (L.) Murrill**

SUBTOMENTOSE CERIOMYCES. YELLOW-CRACKED BOLETUS

Plate 19. Figure 6. $\times \frac{3}{8}$

Pileus convex to expanded, 4-10 cm. broad; surface dry, tomentose, often rimose-areolate, yellowish-brown, reddish-brown or subolivaceous; margin entire, often involute when young; context white or yellowish, unchanging, yellow beneath the cuticle, taste mild; tubes adnate or slightly depressed, often becoming nearly free, yellow, unchanging when wounded, greenish-yellow at the maturity of the spores, mouths large, irregular, sometimes compound; usually angular; spores greenish when fresh, fading to yellowish-brown, subfusiform, smooth, $10-12 \times 4-5\ \mu$; stipe ventricose or nearly equal, tapering below, furfuraceous to glabrous, even, or wholly or partially reticulate, pale-yellow or slightly brownish, often flavous above, reddish-brown when bruised, solid, white or yellowish within, 4-6 cm. long, 0.5-1.5 cm. thick.

This species, like the golden-flesh boletus, is generally distributed in deciduous woods throughout Europe and temperate North America and is often eaten. The cap is usually yellowish-brown or olive-tinted and the stem and large tubes are yellow, the latter not becoming blue when wounded, as is the case in *C. communis*.

Boletинellus merulioides (Schw.) Murrill

ECCENTRIC-STEMMED BOLETINELLUS

Plate 19. Figure 7. $\times \frac{3}{2}$

Pileus thin, irregular, usually lobed, more or less deeply depressed at maturity, gregarious, 5-12 cm. broad; surface dry, minutely tomentose, dull reddish-brown; margin undulate or deeply lobed: context 5-10 mm. thick, yellow, changing slowly to bluish-green when wounded, having a musty or unpleasant odor; tubes decurrent, hymenium honey-yellow when young, becoming dull-yellow with age, often changing slightly to blue when wounded; tubes formed by radiating lamellae 2-3 mm. apart, branching and connected by numerous irregular veins of less prominence; spores subovoid to ellipsoid, smooth, yellow to brownish-ochraceous, $8-11 \times 5-7 \mu$: stipe lateral or eccentric, tough, expanded into the pileus, reticulate at the apex by the decurrent walls of the tubes, concolorous, clothed like the pileus, hollow, 1-3 cm. long, 8-12 mm. thick.

This species occurs throughout the eastern United States in low places or on shaded banks, especially about stumps and decaying roots. It is dull reddish-brown above and yellow below, with very large tubes and eccentric or lateral stem. It is not generally considered edible.